NSWER 1 OF 1 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
ACCESSION NUMBER: 1996-301788 [31] WPIDS
DOC. NO. NON-CPI: N1996-253953
DOC. NO. CPI: C1996-095920
TITLE: Aqueous ink jet printing ink giving weather-resistant prints

- contains solid pigment formulation with acrylic resin, soluble anionic dye, drying accelerator, base, surfactant, alkan-ol and/or alkan-di ol..

DERWENT CLASS: A14 A25 A97 E19 E21 G02 P75 Q31 T04
INVENTOR(S): KVITA, P
PATENT ASSIGNEE(S): (CIBA) CIBA GEIGY AG
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
DE 19547800	A1	19960627	(199631)*		14	C09D011-16<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19547800	A1	DE 1995-1047800	19951220

PRIORITY APPLN. INFO: CH 1994-3918 19941223
INT. PATENT CLASSIF.:
MAIN: C09D011-16
SECONDARY: B01F017-42; B41J003-407; B41M001-26; B65B061-02; B65B061-26; C09D017-00

BASIC ABSTRACT:

DE 19547800 A UPAB: 19960808

Aqueous printing ink for ink jet printing contains (a) 0.1-15 weight% solid pigment formulation containing 10-90 weight% pigment and 90-10 weight% polyacrylic resin containing COOH gps.; (b) 0.1-10 weight% water-soluble anionic dye; (c) 0.5-10 weight% drying accelerator; (d) 0.1-5 weight% base; (e) 0.01-5 weight% nonionic surfactant of formula R-(CH2CH2-O)-Y-(CHY1-CHY2O)q-R1 (I); (f) 0.01-5.0 weight% of (f-1) 8-22C alkanol, (f-2) 6-24C alkandiol, (f-3) nonionic surfactant of formula R2-(CH2-CH2-O)r-(CHY3-CHY4-O)s-H (II) and/or (f-4) dialkyl sulphosuccinate of formula R3O-CO-CH2-CH(SO3-M+)-CO-OR4 (III); and (g) water.

In the formulae, R and R2 are each 8-22C alkyl; R1 is a 1-8C alkyl, 5-8C cycloalkyl, phenyl-(1-4C)-alkyl or styryl; R3 and R4 are each 1-16C alkyl; one of Y1 and Y2 and one of Y3 and Y4 are Me or Et and the others are H; p, q, r, s = 0-24 with (p+q) and (r+s) = 2-24; and M+ is a cation.

USE - Used for printing on paper, coated papers, paper-polyester laminates, metals, plastics, glass, ceramics, 'Zellglas' (RTM: cellulose glass) and lacquered 'Zellglas', partic. for printing packaging based on paper and plastics (all claimed).

ADVANTAGE - The ink has good printing properties and gives good prints with high resistance to weathering.

Dwg.0/0

FILE SEGMENT: CPI EPI GMPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: A04-F01A; A12-W07D; E10-A09B8; E10-E04H; E10-E04L; E10-E04M3; E10-H01D; G02-A04A; G05-F03
EPI: T04-G02C

=>

95-148698/20 D18 E21 CIBA 93.10.15
CIBA GEIGY AG *EP 648816-A1
93.10.15 93CH-003115 *(95.04.19)* C09B 67/00, D06P 3/32

Level tone-in-tone dyeing of leather to disguise any damage - using water-soluble dyestuff mixt. and water-insol. pigment mixt. which give same nuance on leather. (Ger)

C95-068937 R(CH DE ES FR GB IT LI)
Addnl. Data: HESS M, STREICHER G
94.10.06 94EP-810586

D(7-B) E(21-B2, 21-B6, 21-C10, 21-C15, 22-B2, 23-B, 25-C, 25-D, 25-E3)

Dyeing of leather with dyestuff mixts. is carried out with at least 2 water-soluble dyestuffs (I) and at least 2 practically water-insol. pigments (II). The mixt. of (I) gives the same nuance on the leather as the mixt. (II).

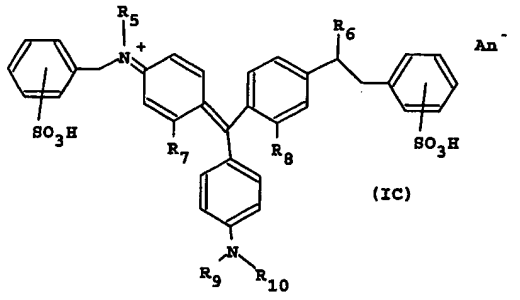
The dyed leather is also claimed.

ADVANTAGE

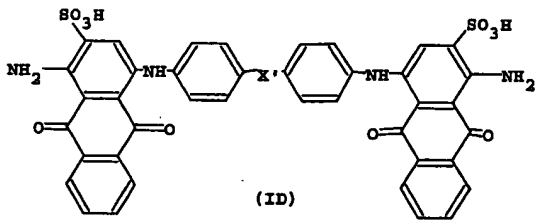
Level tone-in-tone results are obtd. which disguise any damage caused by injuries (broken skin) mites, fungal infections or dung.

PREFERRED DYESTUFFS

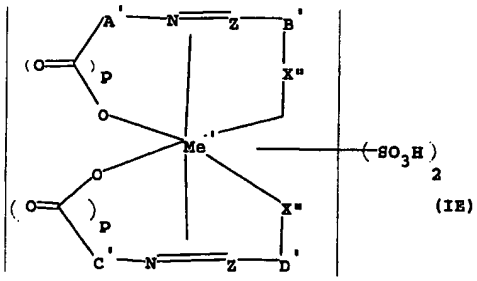
(I) are dyestuffs for trichrome dyeing, pref. metal-free dyestuffs, each with 2 sulpho or carboxyl gps. and a mol. wt. of 790-1100. (I) is esp. (a) a yellow dyestuff of formula K-D-K_1, a red dyestuff of formula K_2-D-K_3 and a blue dyestuff of formula (IC) or anthraquinone dyestuff of formula (ID); or (b) symmetrical 1:2 complexes of formula (IE), which have no or only a slight tendency to aggregate in aq. soln. contg. electrolyte and penetrate standard chrome leather to a depth of 20-200 microns, the difference in penetration of the individual dyestuffs of the mixt. being less than 50 microns.



(IC)

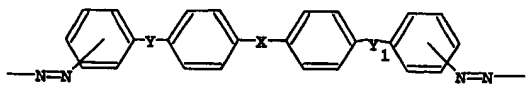


(ID)



(IE)

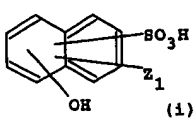
D = gp. of formula (IA);

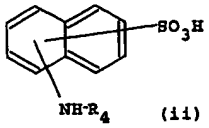


(IA)

Y, Y_1 = -COO-, or $-SO_2NH-$ or esp. $-SO_2O-$;
X = 1-4C alkylene, -CH=CH-, -O-, -S-, $-SO_2-$, -NH-, $-C(R_1)(R_2)-$, dibenzo-furan-2,8-diyl or fluoren-3,6-diyl;
X' = as X, or $-NH-SO_2-$ or -NH-CO-NH-;
R_1, R_2 and R_5-R_9 = 1-4C alkyl;
R_{10} = H or phenyl (opt. substd. by 1-4C alkyl or 1-4C alkoxy);
An^- = anion;
K, K_1 = 5-amino-3-methyl-1-(carboxy-phenyl)-pyrazol-4-yl, 3-cyano-1-(β-sulphatoethyl)-6-hydroxy-4-methyl-pyrid-2-on-5-yl, 3-(Z")-6-hydroxy-4-methyl-1-(sulphophenyl)-pyrid-2-on-5-yl, 1-R_1-6-hydroxy-4-methyl-3-sulphomethyl-pyrid-2-on-5-yl, 6-

hydroxy-4-sulphomethyl-pyrid-2-on-5-yl, acetoacetylaminobenzenesulphonic acid, 5-amino-3-methyl-1-(sulphophenyl)-pyrazol-4-yl, 5-hydroxy-3-methyl-1-(sulphophenyl)-pyrazol-4-yl or 5-hydroxy-3-($COOR_1$)-(sulphophenyl)-pyrazol-4-yl;
Z" = CN, COOH, $COONH_2$ or $COOR_1$;
K_2, K_3 = a coupling component of formula (i) - (iv);


(i)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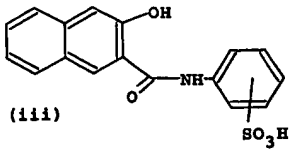
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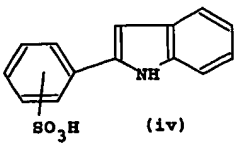
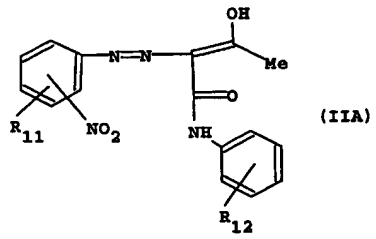

(iv)

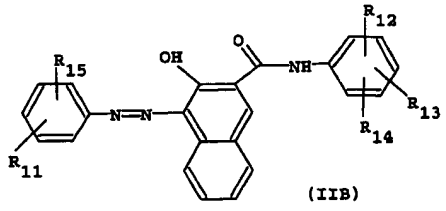
Z_1 = H, OH or NHR_3;
R_3 = H, 1-4C alkyl, cyano-(2-4 C)-alkyl, 1-4C alkyl-carbonyl, aminocarbonyl, benzoyl or phenyl, opt. substd. by 1-4C alkyl;
R_4 = H or phenyl;
Z = N or CH;
A', C' = identical gps. of the benzene or naphthalene series with a OH or carboxy gp. in the o-position to the azo(methine)gp;
B', D' = identical gps. of a coupling component with the X gp. in the o- or α-position to the azo gp. if Z = H, or of an o-hydroxyaldehyde if Z = CH;
X" = -N(Q)- or O;
Q = H or 1-4C alkyl;

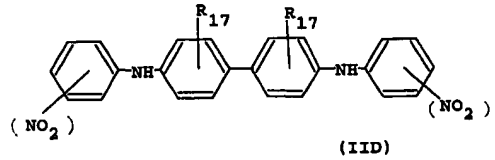
Me' = Cr or Co;
p = 1 or 0.

PREFERRED PIGMENTS

(II) are pigments suitable for trichrome dyeing, esp. a yellow azo pigment of formula (IIA), a red azo pigment of formula (IIB), unsubstd. Cu phthalocyanine (IIC) as blue pigment and/or a brown pigment of formula (IID).


(IIA)


(IIB)


(IID)

R_{11-14} = H, 1-4C alkyl, 1-4C alkoxy or halogen;
R_{15} = $-SO_2-N(R_{16})_2$;
R_{16} = opt. substd. 1-4C alkyl;
R_{17} is not defined.

PREFERRED PROCESS

Before or during treatment with (II), the leather is treated with a cationic ancillary, pref. a poly-quat amine-ethylene oxide adduct, a cationic formulation based on chlorinated hydrocarbons and n-alkyl derivs. or esp. a cationic phenolsulphonic acid condensate (III) contg. Cr.

EXAMPLE

100 pts. wt. dry leather (crust) were treated in a soln. of 600 pts. wt. water, 1 pt. wt. 24% NH_3 and 2 pts. wt. fatty acid amide condensation prod. for 40 min. at 50°C. The leather was then treated in a liquor comprising 200 pts. wt. water, 2 pts. wt. Na salts of aromatic sulphonic and aliphatic dicarboxylic acids and 2 pts. wt. Na dinaphthylmethanedisulphonic acid for 20 min. at 20°C. 3 pts. wt. 24% NH_3 were added and the treatment was continued for 5 min. 1 pts. wt. formulation of ethoxylated fatty amines and fatty alcohols, 1 pt. wt. yellow dyestuff of formula (IF; M = Co; A = NO_2; B = SO_3; E_1

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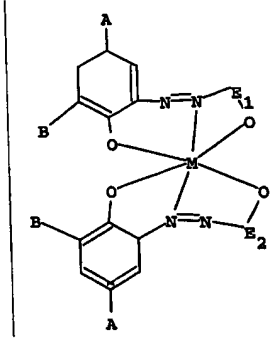
= gp. of formula (a); E_2 = gp. of formula (b)), 3.6 pts. wt. red dyestuff of formula (IF; M = Cr; A = SO_3; B = NO_2; E_1, E_2 = gp. of formula (c)) and 0.8 pts. wt. brown dyestuff of formula (IF; M = Cr; A = NO_2; B = SO_3, E_1, E_2 = gp. of formula (d)), (with bond * to N and bond ** to O).



(IF)

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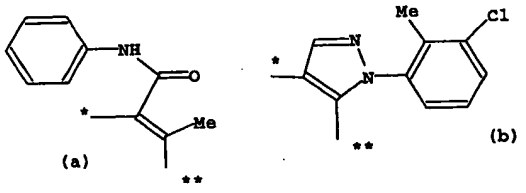

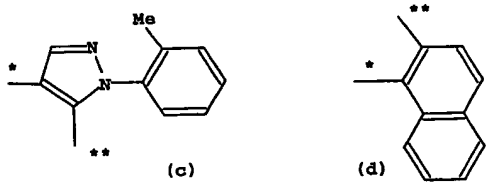

After drying for 60 min. 400 pts. wt. water at 60°C. were added and dyeing was continued for 5 mins. then 4 pts. natural tannin were added and, after 35 min. 2 pts. wt. 85% HCOOH and after another 20 mins. 3 pts. wt. 85% HCOOH were added to pH ca. 3.7 and treatment was continued for 20 mins. before the liquor was drained off. The leather was treated with 600 pts. wt. water and 2 pts. wt. (III) for 20 min. at 50°C. and then 1.5 pts. wt. red pigment of formula (IIB;R_{11}, R_{12} = 2-OMe; R_{13} = 4-OMe;R_{14} = 5-Cl; R_{15} = %-SO_2NEt_2), 0.2 pts. wt. blue pigment (IIC) and 0.55 pts. wt. brown pigment 3,3'-

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dimethoxy-4,4'-bis(2,4-dinitrophenylamino)-diphenyl were added. After dyeing for 20 min. ca. 0.5 pt. wt. 85% HCOOH were added to pH 3.5 and dyeing was continued for 20 min. then the leather was finished in the usual way. The leather was dyed level red-brown and any flaws in the grain were disguised well. The light fastness was better than that obtd. without the pigments. (LJ)
(33pp0016DwgNo.0/0)
SR:EP433229 EP548014 EP55808 EP558450 EP61670

EP 648816-A/8